REMARKS

This amendment is responsive to the non-final Office Action of October 1, 2008. Reconsideration and allowance of claims 1-20 are requested.

The Office Action

Claims 1-6, 10, and 11 stand rejected under 35 U.S.C. § 102 over Gupta (US 2003/0065258).

Claims 7-9 stand rejected under 35 U.S.C. § 103 over Gupta.

Background

As pointed out in the Background of the present application, clinical validation of the prior art perfusion measurement techniques may fail due to the fact that often only an insufficient left ventricle input function is available and that therefore the maximum upslope of the left ventricle function cannot be measured accurately. The present application cures this shortcoming by looking to the perfusion in the normally perfused parts which is used as a reference of the speed of contrast medium injection. This is as opposed to the prior art, which try to derive this information from, for example, the left ventricle time-intensity profile. This is explained solely for the purpose of assisting the Examiner in understanding the general subject matter of the present application, and should not be construed as limiting the claims in any way.

Discussion

Claim 1 calls for a first code segment which first selects at least one image segment with normal image perfusion. Gupta is exemplary of the prior art discussed in the background of the present application, in that it fails to suggest selecting an image segment which has normal perfusion. Paragraphs [0007]-[0008] of Gupta referenced in the Office Action are concerned with errors due to patient movement. More specifically, the perfusion images have a significant degree of noise, making it hard to track the moving portion of the heart in which perfusion is to be measured. Paragraphs [0007]-[0008] propose to address this problem by generating standard, non-perfusion high resolution images and using semi-automatic

registration of the noisy perfusion images and high resolution non-perfusion images to track the motion more accurately. The high resolution images may, for example, be proton density images. Thus, paragraphs [0007]-[0008] of Gupta referenced in the Office Action address motion errors and do not suggest selecting at least one image segment with normal perfusion.

Claim 8 further calls for the cardiac perfusion parameters of the remaining segments to be based on a perfusion parameter of the at least one image segment having normal perfusion. In Gupta, the perfusion parameters of each segment of the perfusion cardiac image are based on the perfusion properties of that segment. The Gupta motion correction technique helps assure that the image segments corresponding to each segment of the moving heart in fact represent the same segment of the moving heart throughout the series of images from which the perfusion parameters are determined.

Thus, Gupta is concerned with accurately tracking the motion of the heart to improve the accuracy of the generated perfusion parameters and does not address basing the perfusion parameters of image segments, particularly image segments with less than normal perfusion, on a perfusion parameter of at least one image segment having normal perfusion.

New **claims 12-15** have been added to set forth how the image segments with normal perfusion and the remaining image segments are selected and/or interact.

For at least the reasons set forth above, it is submitted that **claim 1 and claims 2-9 and 12-15 dependent therefrom** distinguish patentably and unobviously over the references of record.

Claim 10 has been placed in independent form. Claim 10 has also been amended to call for normalizing the maximum upslopes of the image segments in accordance with the highest maximum upslope in order to generate a cardiac perfusion parameter for each of the image segments. Although not claimed, the present application does indicate that the segment(s) with the highest maximum upslope is an indicator of a segment with normal perfusion. Gupta does not suggest normalizing the maximum upslope for each image segment in accordance with a

highest maximum upslope. Accordingly, it is submitted that **claim 10 and new claim 16 dependent therefrom** distinguish patentably over the references of record.

Claim 11 calls for selecting at least one image segment with normal perfusion and determining relative cardiac perfusion parameters of the remaining image segments based on a perfusion parameter of the image segment with normal perfusion. Again, paragraphs [0007]-[0008] of Gupta address motion compensation and do not suggest identifying an image segment with normal perfusion nor determining relative cardiac perfusion parameters of the remaining image segments based on the perfusion parameter of the image with normal perfusion. New **claims 17-20** have been added to provide the method claim set with dependent claims of a variety of scopes.

CONCLUSION

For the reasons set forth above, it is submitted that claims 1-20 distinguish patentably over the references of record and meet all statutory requirements. An early allowance of all claims is requested.

Respectfully submitted,

Thomas E. Kocovsky, Jr.
Registration No. 28,383

FAY SHARPE LLP
The Halle Building, 5th Floor
1228 Euclid Avenue
Cleveland, OH 44115-1843
Telephone: 216.363.9000 (main)
Telephone: 216.363.9122 (direct)
Facsimile: 216.363.9001
E-Mail: tkocovsky@faysharpe.com

Direct All Correspondence to:
Yan Glickberg, Reg. No. 51,742
US PHILIPS CORPORATION
P.O. Box 3001
Briarcliff Manor, NY 10510-8001
(440) 483-3455 (tel)
(440) 483-2452 (fax)